

FORM PTO-1449 (Modified)

US DEPARTMENT OF COMMERCE
US Patent and Trademark Office

Docket No.

50623.132

Application No.

09/966,036

INFORMATION DISCLOSURE CITATION

in an Application

(Use several sheets if necessary)

Applicant

Dorrie M. Happ

Filing Date

September 28, 2001

Group Art Unit

1615

U.S. PATENT DOCUMENTS

Examiner Initial	Ref. No.	Document Number	Date of Patent	Name	Class	Subclass	Filing Date if Appropriate
BF	A1	2,968,649	01/17/61	Pailthorp et al.			
	A2	3,051,677	08/28/62	Rexford			
	A3	3,178,399	04/13/65	Lo			
	A4	3,324,069	06/06/67	Koblitz et al.			
	A5	3,779,805	12/18/73	Alsberg			
	A6	3,856,827	12/24/74	Cavitt			
	A7	4,076,929	02/08/78	Dohany			
	A8	4,197,380	04/08/80	Chao et al.			
	A9	4,304,010	12/08/81	Mano			
	A10	4,346,710	08/31/82	Thanawalla et al.			
	A11	4,353,960	10/12/82	Endo et al.			
	A12	4,399,264	08/16/83	Squire			
	A13	4,413,359	11/08/83	Akiyama et al.			
	A14	4,423,183	12/27/83	Close			
	A15	4,485,250	11/17/84	Squire			
	A16	4,530,569	07/23/85	Squire			
	A17	4,564,013	01/14/86	Lilenfeld et al.			
	A18	4,569,978	02/11/86	Barber			
	A19	4,632,842	12/30/86	Karwoski et al.			
	A20	4,636,346	01/13/87	Gold et al.			
	A21	4,718,907	01/12/88	Karwoski, et al.			
	A22	4,749,585	06/07/88	Greco et al.			
	A23	4,754,009	06/28/88	Squire			
	A24	4,770,939	09/13/88	Sietsess et al.			

BF	A25	4,871,357	10/03/89	Hsu et al.			
	A26	4,876,109	10/24/89	Mayer et al.			
	A27	4,897,457	01/30/90	Nakamura et al.			
	A28	4,908,404	03/13/90	Benedict et al.			
	A29	4,910,276	03/20/90	Nakamura et al.			
	A30	4,931,287	06/05/90	Bae et al.			
	A31	4,935,477	06/19/90	Squire			
	A32	4,948,851	08/14/90	Squire			
	A33	4,973,142	11/27/90	Squire			
	A34	4,975,505	12/04/90	Squire			
	A35	4,977,008	12/11/90	Squire			
	A36	4,977,025	12/11/90	Squire			
	A37	4,977,026	12/11/90	Squire			
	A38	4,977,297	12/11/90	Squire			
	A39	4,982,056	01/01/91	Squire			
	A40	4,985,308	01/15/91	Squire			
	A41	4,999,248	03/12/91	Squire			
	A42	5,000,547	03/19/91	Squire			
	A43	5,006,382	04/09/91	Squire			
	A44	5,030,394	07/09/91	Sietes et al.			
	A45	5,047,020	09/10/91	Hsu			
	A46	5,051,114	09/24/91	Nemser et al.			
	A47	5,051,978	09/24/91	Mayer et al.			
	A48	5,053,048	10/01/91	Pinchuk			
	A49	5,076,659	12/31/91	Bekiarian et al.			
	A50	5,093,427	03/03/92	Barber			
	A51	5,107,852	04/28/92	Davidson et al.			
	A52	5,110,645	05/05/92	Matsumoto et al.			
	A53	5,176,972	01/05/93	Bloom et al.			
	A54	5,185,408	02/09/93	Tang et al.			
BF	A55	5,246,451	09/21/93	Trescony et al.			

BF	A56	5,276,121	01/04/94	Resnick			
	A57	5,296,283	03/22/94	Froggatt			
	A58	5,302,385	04/12/94	Khan et al.			
	A59	5,308,685	05/03/94	Froggatt			
	A60	5,310,838	05/10/94	Hung et al.			
	A61	5,324,889	06/28/94	Resnick			
	A62	5,326,839	07/05/94	Resnick			
	A63	5,336,518	08/09/94	Narayanan et al.			
	A64	5,338,608	08/16/94	Resnick			
	A65	5,342,348	08/30/94	Kaplan			
	A66	5,353,368	10/04/94	Resnick			
	A67	5,354,910	10/11/94	Hung et al.			
	A68	5,368,566	11/29/94	Crocker			
	A69	5,383,853	01/24/95	Jung et al.			
	A70	5,383,928	01/24/95	Scott et al.			
	A71	5,395,311	03/07/95	Andrews			
	A72	5,403,341	04/04/95	Solar			
	A73	5,408,020	04/18/95	Hung et al.			
	A74	5,417,969	05/23/95	Hsu et al.			
	A75	5,443,458	08/22/95	Eury			
	A76	5,545,208	08/13/96	Wolff et al.			
	A77	5,560,463	10/01/96	Link et al.			
	A78	5,562,734	10/08/96	King			
	A79	5,575,818	11/19/96	Pinchuk			
	A80	5,584,877	12/17/96	Miyake et al.			
	A81	5,591,224	01/07/97	Schwartz et al.			
	A82	5,604,283	02/18/97	Wada et al.			
	A83	5,616,608	04/01/97	Kinsella et al.			
	A84	5,628,728	05/13/97	Tachibana et al.			
	A85	5,632,771	05/27/97	Boatman et al.			
	A86	5,632,776	05/27/97	Kurumatani et al.			
	A87	5,632,840	05/27/97	Campbell			
	A88	5,635,201	06/03/97	Fabo			
BF	A89	5,684,061	11/04/97	Ohnishi et al.			

82	A90	5,691,311	11/25/97	Maraganore et al.			
	A91	5,697,967	12/16/97	Dinh et al.			
	A92	5,713,949	02/03/98	Jayaraman			
	A93	5,750,234	05/12/98	Johnson et al.			
	A94	5,758,205	05/26/98	Hara et al.			
	A95	5,759,205	06/02/98	Valentini			
	A96	5,804,318	09/08/98	Pinchuk et al.			
	A97	5,827,587	10/27/98	Fukushi			
	A98	5,858,990	01/12/99	Walsh			
	A99	5,860,963	01/19/99	Azam et al.			
	A100	5,861,168	01/19/99	Cooke et al.			
	A101	5,874,165	02/23/99	Drumheller			
	A102	5,879,697	03/09/99	Ding et al.			
	A103	5,897,911	04/27/99	Loeffler			
	A104	5,911,704	06/15/99	Humes			
	A105	5,922,393	07/13/99	Jayaraman			
	A106	5,928,279	07/27/99	Shannon et al.			
	A107	5,932,299	08/03/99	Katoot			
	A108	5,945,115	08/31/99	Dunn et al.			
	A109	6,033,724	03/07/00	Molitor			
	A110	6,060,534	05/09/00	Ronan et al.			
	A111	6,090,134	07/18/00	Tu et al.			
	A112	6,096,396	08/01/00	Patton et al.			
	A113	6,096,798	08/01/00	Luthra et al.			
	A114	6,096,809	08/01/00	Lorcks et al.			
	A115	6,099,563	08/08/00	Zhong			
	A116	6,124,045	09/26/00	Soda et al.			
	A117	6,179,817	01/30/01	Zhong			1/28/99
	A118	6,197,051	03/06/01	Zhong			2/11/99
	A119	6,214,901	04/10/01	Chudzik et al.			4/15/99
	A120	6,224,894	05/01/01	Jamiolkowski et al.			8/11/00
85	A121	6,231,590	05/15/01	Slaikeu et al.			7/12/99

BF	A122	6,242,041	06/05/01	Katoot et al.			11/10/98
	A123	6,262,034	07/17/01	Mathiowitz et al.			11/25/97
	A124	6,273,913	08/14/01	Wright et al.			4/16/98
	A125	6,344,035	02/05/02	Chudzik			10/20/00
	A126	6,362,271	03/26/02	Lin et al.			8/27/99
	A127	6,408,878	06/25/02	Unger et al.			2/28/01
	A128	6,410,612	06/25/02	Hatanaka			3/3/00
	A129	6,464,683	10/15/02	Samuelson et al.			10/24/00
	A130	6,545,097	04/08/03	Pinchuk et al.			12/12/00
	A131	6,551,708	04/22/03	Tsuda et al.			6/17/98
	A132	6,716,444	04/06/04	Castro et al.			9/28/00
BF	A133	6,746,773	06/08/04	Llanos et al.			9/25/01
*	A134	09/966,036		Happ			09/28/01
	A135	10/176,504		Roorda et al.			06/21/02
	A136	10/176,510		Hossainy et al.			06/21/02
	A137	10/177,117		Hossainy			06/21/02
	A138	10/177,154		Hossainy et al.			06/21/02
	A139	10/198,912		Ding et al.			07/19/02
	A140	10/320,899		Shah et al.			12/16/02
	A141	10/376,348		Ding et al.			02/26/03
	A142	10/428,691		Pacetti			05/01/03
*	A143	10/931,927		Pacetti			08/31/04

U.S. PATENT APPLICATION PUBLICATION DOCUMENTS

Examiner Initial	Ref. No.	Document Number	Date of Publication	Name	Class	Subclass	Filing Date if Appropriate
BF	A144	2001/0029351	10/11/01	Falotico et al.			05/7/01
	A145	2002/0051730	05/02/02	Bodnar et al.			09/28/01
	A146	2002/0090389	07/11/02	Humes et al.			11/30/01
	A147	2002/0094440	07/18/02	Llanos et al.			9/25/01
	A148	2002/0099438	07/25/02	Furst			10/26/01
	A149	2002/0111590	08/15/02	Davila et al.			9/25/01
	A150	2002/0133183	09/19/02	Lentz et al.			9/28/01
BF	A151	2002/0143386	10/03/02	Davila et al.			6/19/01

* : Applications, not prior art.

BF	A152	2002/0165608	11/07/02	Llanos et al.			6/22/01
	A153	2002/0188037	12/12/02	Chudzik et al.			6/18/02
	A154	2003/0004563	01/02/03	Jackson et al.			6/29/01
	A155	2003/0031780	02/13/03	Chudzik et al.			10/10/02
	A156	2003/0039689	02/27/03	Chen et al.			4/26/02
	A157	2003/0060877	03/27/03	Falotico et al.			4/15/02
BF	A158	2003/0065346	04/03/03	Evens et al.			10/21/02
XX	A159	2003/0073961	04/17/03	Happ			9/28/01
BF	A160	2003/0077312	04/24/03	Schmulewicz et al.			10/22/01
BF	A161	2004/0063805	04/01/04	Pacetti et al.			9/19/02
BF	A162	2004/0102758	05/27/04	Davila et al.			8/7/03

FOREIGN PATENT DOCUMENTS

Examiner Initial	Ref. No.	Document Number	Date of Publication	Country	Class	Subclass	Translation	
							Yes	No
BF	B1	DE 19723723 A1	12/03/98	Germany (w/English Abstract)				
	B2	EP 0568310 A1	11/03/93	EPO				
	B3	EP 0633032 A1	01/11/95	EPO				
	B4	EP 0747069 A2	12/11/96	EPO				
	B5	EP 0815803 A1	01/07/98	EPO				
	B6	EP 0893108 A2	01/27/99	EPO				
	B7	EP 0950385 A2	10/20/99	EPO				
	B8	EP 0950386 A2	10/20/99	EPO				
	B9	EP 0968688 A1	01/05/00	EPO				
	B10	EP 0997115 A2	05/03/00	EPO				
	B11	EP 1023879 A2	08/02/00	EPO				
	B12	EP 1192957 A2	04/03/02	EPO				
	B13	WO 92/05695	04/16/92	PGI WO				
	B14	WO 92/18320	10/29/92	PGI WO				
	B15	WO 94/02185	02/03/94	PGI WO				
	B16	WO 96/21404	07/18/96	PGI WO				
	B17	WO 97/41164	11/06/97	PGI WO				
	B18	WO 98/08463	03/05/98	PGI WO				
	B19	WO 98/13405	04/02/98	PGI WO				
	B20	WO 98/58680	12/30/98	PGI WO				
BF	B21	WO 99/32051	07/01/99	PGI WO				

XX: Examined published application, Not prior art

BF	B22	WO 99/55396	11/04/99	PCT	WO				
	B23	WO 00/27455	05/18/00	PCT	WO				
	B24	WO 00/29043	05/25/00	PCT	WO				
	B25	WO 00/32255	06/08/00	PCT	WO				
	B26	WO 00/38754	07/06/00	PCT	WO				
	B27	WO 00/41738	07/20/00	PCT	WO				
	B28	WO 01/30403	05/03/01	PCT	WO				
	B29	WO 01/87342	11/22/01	PCT	WO				
	B30	WO 01/87368	11/22/01	PCT	WO				
	B31	WO 01/87372	11/22/01	PCT	WO				
	B32	WO 01/87376	11/22/01	PCT	WO				
	B33	WO 02/24249	03/28/02	PCT	WO				
	B34	WO 02/26139	04/04/02	PCT	WO				
	B35	WO 02/26271	04/04/02	PCT	WO				
	B36	WO 02/26281	04/04/02	PCT	WO				
	B37	WO 02/47731	06/20/02	PCT	WO				
	B38	WO 02/47732	06/20/02	PCT	WO				
BF	B39	WO 03/022324	03/20/03	PCT	WO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

BF	C1	Arnold et al., <i>Effects of environment on the creep properties of a poly (ethylmethacrylate) based bone cement</i> J. Mater. Sci: Mater. In Med., Vol. 12, pp. 707-717 (2001).
	C2	Bellex International, <i>CYTOP®, Amorphous Fluorocarbon Polymer</i> , 1 page (no date).
	C3	Bellex International, <i>Selected CYTOP Physical Data</i> , 1 page (no date).
	C4	Bellex International, <i>CYTOP®</i> , http://www.bellexinternational.com/cytop.htm , printed March 30, 2001, 1 page.
	C5	Čířková et al., <i>Imitation effects of residual products derived from p(HEMA) gels</i> , Biomaterials, Vol. 9, (July 1998), pp. 372-375.
	C6	Dalsin et al., <i>DOPA: A New Anchor for PEGylation of Biomaterial Surfaces</i> , Soc. For Biomaterials 28 th Annual Meeting Transactions, pp. 40 (2002).
	C7	Deb et al., <i>Effect of crosslinking agents on poly(ethylmethacrylate) bone cements</i> , J. of Mater.Sci: Mater. In Med., Vol. 8, pp. 829-833 (1997).
	C8	Del Guerra et al., <i>In vitro biocompatibility of fluorinated polyurethanes</i> , J. Mater. Sci. in Med., Vol. 5, pp. 452-456 (1994).
	C9	DuPont, <i>Teflon AF 1601S amorphous fluoropolymer solutions</i> , product information, 2 pages (1998).
	C10	DuPont, <i>Processing of Teflon® AF</i> , Teflon Amorphous Fluoropolymer, http://www.dupont.com/teflon/af/processing.html , printed March 30, 2001, 1 page.
	C11	DuPont, <i>High-Performance/Potential Applications</i> , Teflon Amorphous Fluoropolymer, http://www.dupont.com/teflon/af/potapps.html , printed March 30, 2001, 3 pages.
BF	C12	DuPont, <i>Performance Comparison of Teflon AF</i> , Teflon Amorphous Fluoropolymer, http://www.dupont.com/teflon/af/performance.html , printed March 30, 2001, 3 pages.

BF	C13	DuPont, <i>Unique Properties of Teflon® AF</i> , Teflon Amorphous Fluoropolymer, http://www.dupont.com/teflon/af/unique.html , printed March 30, 2001, 3 pages.
	C14	DuPont, <i>Teflon® AF: A New Generation of High-Performance Fluoropolymer Resins</i> , http://www.dupont.com/teflon/af/index.html , printed March 30, 2001, 1 page.
	C15	DuPont, <i>Teflon® Protects Superconductors Against Acid</i> , Teflon Amorphous Fluoropolymer, http://www.dupont.com/teflon/af/superconductor.html , printed September 21, 2004, 2 pages.
	C16	DuPont, <i>Available Grades of DuPont Teflon® AF</i> , Teflon Amorphous Fluoropolymer, http://www.dupont.com/teflon/af/grades.html , printed September 21, 2004, 2 pages.
	C17	DuPont, <i>Teflon® AF amorphous fluoropolymers</i> , Product Information, 6 pages (1998).
	C18	DuPont, Sales Notice, Teflon Amorphous Fluoropolymer, http://www.dupont.com/teflon/af/patent.html , printed September 21, 2004, 2 pages.
	C19	Fine et al., <i>Improved nerve regeneration through piezoelectric vinylidene fluoride- trifluoroethylene copolymer guidance channels</i> , <i>Biomaterials</i> , Vol. 12, October, pp. 775-780 (1991).
	C20	Fischell, <i>Polymer Coatings for Stents</i> , <i>Circulation</i> , 94:1494-95 (1996).
	C21	Gullickson, <i>Reference Data Sheet on Common Chlorinated Solvents</i> , http://www.mcs.net/~hutter/tee/chlorina.html , printed March 30, 2001, 5 pages.
	C22	Gunn et al., <i>Stent coatings and local drug delivery</i> , <i>Eur. Heart J.</i> , Vol. 20, issue 23, pp. 1693-1700 (1999).
	C23	Harper et al., <i>Fatigue Characteristics of Polyethylmethacrylate Based Bone Cement Reinforced with Silane Coupled Hydroxyapatite</i> , Fifth World Biomaterials Congress, May 29-June 2, 1996, Toronto, Canada, Abstract 351, 3 pgs.
	C24	Harper et al., <i>Mechanical properties of hydroxyapatite reinforced poly (ethyl methacrylate) bone cement after immersion in a physiological solution: influence of a silane coupling agent</i> , <i>J. Mater. Sci.: Mater. In Med.</i> , Vol. 11, pp. 491-497 (2000).
	C25	Kruft et al., <i>Studies on radio-opaque polymeric biomaterials with potential applications to endovascular prostheses</i> , <i>Biomaterials</i> , Vol. 17, No. 18, pp. 1803-1812 (1996).
	C26	Lambert et al., <i>Localized Arterial Wall Drug Delivery From a Polymer-Coated Removable Metallic Stent</i> , <i>Circulation</i> , Vol. 90, No. 2, pp. 1003-1011 (1994).
	C27	Laroche et al., <i>Polyvinylidene fluoride (PVDF) as a biomaterial: From polymeric raw material to monofilament vascular suture</i> , <i>J. of Biomedical Mat. Research</i> , Vol. 29, pp. 1525-1536 (1995).
	C28	Lin et al., <i>Fluoropolymer Alloys Performance Optimization of PVDF Alloys</i> , <i>Fluoropolymers 2 Properties</i> , edited by Hougham et al., Plenum Publishers N.Y. pp. 121-136 (1999).
	C29	Lin et al., <i>Surface characterization and platelet adhesion studies on fluorocarbons prepared by plasma-induced graft polymerization</i> , <i>J. Biomater Sci. Polymer Edn.</i> , Vol. 11, No. 7, pp.701-714 (2000).
	C30	Luthra, Biointeractions Ltd (BIL), http://www.biomateria.com/biointeractions.html , printed September 21, 2004, 3 pages.
	C31	3M, <i>Specialty Fluids 3M™ Fluorinert™ Liquids, Typical Properties</i> , http://www.3m.com/market/industrial/fluids/fluoprop.html , printed March 30, 2001, 3 pages.
	C32	Materials Engineering, <i>Applications in Design/Manufacturing/ R&D</i> , Materials Selector 1993, Penton Publishing (1992) 6 pgs.
	C33	Medtronic, Trillium Affinity NT, Oxygenator, Product Information, 6 pages (2000).
	C34	NCMS SOLV-DB, <i>Query Results for: CFC</i> , http://solvdb.ncms.org/CAT01.idc?chemcat=CFC , printed March 30, 2001, 2 pages.
	C35	NCMS SOLV-DB, <i>Query Results for: FC-75 Fluorinert</i> , http://solvdb.ncms.org/common01.idc , printed March 30, 2001, 2 pages.
BF	C36	Novick et al., <i>Protein-containing hydrophobic coatings and films</i> , <i>Biomaterials</i> , Vol. 23, no. 2 (2002) pp. 441-448.

bf	C37	Parkell, Inc., <i>SNAP Powder-Liquid Temporary Crown and Bridge Resin</i> , http://www.parkell.com/snap.html , printed October 21, 2004, 1 pg.
	C38	Parkell, Inc., <i>Material Safety Data Sheets</i> , http://www.parkell.com/msds.html , printed October 21, 2004, 2 pgs.
	C39	Parkell, Inc., <i>MSDS No: S426, VAR, Material Safety Data Sheet</i> , 2 pgs (2002).
	C40	Parkell, Inc., <i>MSDS No: S441, Material Safety Data Sheet</i> , 2 pgs (2002).
	C41	Porté-Durrieu et al., <i>Surface Treatment of Biomaterials by Gamma and Swift Heavy Ions Grafting</i> , <i>Nuclear Instruments and Methods in Physics Research</i> , Vol. B 151, pp. 404-415 (1999).
	C42	Porté-Durrieu et al., <i>Development of "Heparin-Like" Polymers Using Swift Heavy Ion and Gamma Radiation. I. Preparation and Characterization of the Materials</i> , <i>Surface Treatment of Biomaterials</i> , pp. 119-127 (2000).
	C43	Revell et al., <i>Experimental Studies of the Biological Response to a New Bone Cement: II Soft Tissue Reactions in the Rat</i> , <i>Clinical Materials</i> , Vol. 10, pp. 233-238 (1992).
	C44	Techspray, <i>Bulk Solvents</i> , http://www.techspray.com/bulksup.htm , printed September 21, 2004, 3 pages.
	C45	Techspray, <i>Flux Remover AMS</i> , Product Information, http://www.techspray.com/1665info.htm , printed August 28, 2001, 2 pages.
	C46	Teomin et al., <i>Perivascular delivery of heparin for the reduction of smooth muscle cell proliferation after endothelial injury</i> , <i>J. of Controlled Release</i> , Vol. 60, pp. 129-142 (1999).
	C47	Topol et al., <i>Frontiers in Interventional Cardiology</i> , <i>Circulation</i> , Vol. 98, pp. 1802-1820 (1998).
	C48	Urban et al., <i>Why Make Monofilament Sutures Out of Polyvinylidene Fluoride?</i> , <i>ASAIO J.</i> , Vol. 40, No. 2, pp 145-156 (1994).
	C49	Verweire et al., <i>Evaluation of fluorinated polymers as coronary stent coating</i> , <i>J. Mater.Sci: Mater. In Med.</i> , Vol. 11, No. 4, pp. 207-212 (2000).
	C50	Weightman et al., <i>The Mechanical Properties of Cement and Loosening of the Femoral Component of Hip Replacements</i> , <i>J. Bone and Joint Surg.</i> , Vol. 69-B, No. 4, pp. 558-564 (Aug. 1987).
	C51	Wholey et al., <i>Global Experience in Cervical Carotid Artery Stent Placement, Catherization and Cardiovascular Inteventions</i> , vol. 50, no. 2, pp. 160-167 (2000).
	C52	Woo et al., <i>Phase Behavior of Polycarbonate Blends with Selected Halogenated Polymers</i> , <i>J. Appl. Polym. Sci.</i> , Vol. 30, pp. 4243-4249 (1985).
	C53	International Search Report for PCT appl. PCT/US03/15347, filed 5/14/03, date of mailing 9/4/03, 6 pgs.
	C54	International Search Report for PCT appl. PCT/US03/15544, filed 5/14/03, date of mailing 1/23/04, 9 pgs.
	C55	International Search Report for PCT appl. PCT/US03/28643, filed 9/10/03, date of mailing 3/12/03, 10 pgs.
bf	C56	International Search Report for PCT appl. PCT/US03/21170, filed 7/2/03, date of mailing 10/31/03, 8 pgs.
EXAMINER	Blessing Fubara	DATE CONSIDERED 6-08-05
EXAMINER: Initial if references considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		